

**REMARKS**

By this amendment, claims 1, 4, 9, 11, 15-17 and 20 have been amended, and claims 2, 7, 12-14 and 19 have been cancelled. Accordingly, claims 1, 3-6, 9-11, 15-18 and 20 are currently pending in the application, of which claims 1, 4, 11, 12 and 16 are independent claims.

Applicants respectfully submit that the above amendments do not add new matter to the application and are fully supported by the specification. Support for the amendments may be found at least at page 6, line 18 through page 7, line 17 of the specification.

Entry of this Amendment is proper under 37 C.F.R. §1.116 because it (a) places the application in *prima facie* condition for allowance for the reasons discussed herein; (b) does not raise new issues requiring further search and/or consideration by the Examiner because similar subject matter was previously considered by the Examiner and thus further consideration and/or search by the Examiner is not warranted; (c) places the application in better form for appeal, should an appeal be necessary; and (d) responds to formal matters set forth by the Examiner. For at least these reasons, entry of the present Amendment and Remarks is therefore respectfully requested. Accordingly, Applicants request reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

***Rejections Under 35 U.S.C. § 103***

Claims 1-7 and 9-20 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U. S. Patent Application Publication No. 2002/0113552 A1, issued to Juestel, *et al.* ("Juestel"). Applicant respectfully traverses this rejection for at least the following reasons.

To establish a *prima facie* case of obviousness, the Office Action must present three criteria. First, there must be some suggestion or motivation to modify the reference or to

combine reference teachings. Second, there must be a reasonable expectation of success.

Finally, the reference or references, when combined, must disclose or suggest all of the claim limitations. The motivation to modify the prior art and the reasonable expectation of success must both be found in the prior art and not based upon a patent application's disclosure. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

First, assuming, *arguendo*, a suggestion to modify Juestel and a reasonable expectation of success, Juestel fails to teach all of the claim limitations of claim 1. Claim 1 as amended recites, *inter alia*, a plasma display panel with a "red phosphor pattern containing Y(V,P)O<sub>4</sub>:Eu and (Y,Gd)BO<sub>3</sub>:Eu and having a red-color purity ranging from 0.657 to 0.670 for a chromaticity coordinate value x and from 0.322 to 0.332 for a chromaticity coordinate value y, and wherein the amount of Y(V,P)O<sub>4</sub>:Eu is in the range of 20-80% by weight based on the total weight of Y(V,P)O<sub>4</sub>:Eu and (Y,Gd)BO<sub>3</sub>:Eu."

Juestel's Figure 3 discloses chromaticity coordinate values for red phosphor patterns containing proportional quantities of Y(V,P)O<sub>4</sub>:Eu and (Y,Gd)BO<sub>3</sub>:Eu. Points 21-24 on Juestel's Figure 3 represent Y(V,P)O<sub>4</sub>:Eu in a range of 20-80% by weight based on the total weight of Y(V,P)O<sub>4</sub>:Eu and (Y,Gd)BO<sub>3</sub>:Eu in the red phosphor pattern. See Juestel, Fig. 3 and Table 5. However, the chromaticity coordinate values of points 21-24 are well outside the range of chromaticity coordinate values recited in claim 1. Thus, Juestel does not teach or suggest Y(V,P)O<sub>4</sub>:Eu in a range of 20-80% by weight based on the total weight of Y(V,P)O<sub>4</sub>:Eu and (Y,Gd)BO<sub>3</sub>:Eu in the red phosphor pattern, with chromaticity coordinate values within the ranges recited in claim 1. Therefore, Juestel does not teach or suggest all elements of claim 1. Accordingly, Applicant asserts that claim 1 is allowable and respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claims 1 and 3, which depends from claim 1.

Second, assuming *arguendo* a suggestion to modify Juestel and a reasonable expectation of success, Juestel also fails to teach all of the claim limitations of claim 4. Claim 4 as amended recites, *inter alia*, a plasma display panel where “the red phosphor pattern contains  $\text{Y(V,P)O}_4\text{:Eu}$  and  $\text{(Y,Gd)BO}_3\text{:Eu}$ , and the red light has an afterglow decay time of 4.0-8.8 ms and a red-color purity ranging from 0.663 to 0.670 for a chromaticity coordinate value x and from 0.322 to 0.332 for a chromaticity coordinate value y.”

As discussed above, Juestel’s Figure 3 discloses chromaticity coordinate values for red phosphor patterns containing proportional quantities of  $\text{Y(V,P)O}_4\text{:Eu}$  and  $\text{(Y,Gd)BO}_3\text{:Eu}$ . Only point 25 on Juestel’s Figure 3 approaches the chromaticity coordinate value ranges recited in claim 4. However, the [x, y] chromaticity coordinate value of point 25 equals the [x, y] chromaticity coordinate value of  $\text{Y(V,P)O}_4\text{:Eu}$  disclosed in Juestel, which is [0.662, 0.328]. See Juestel, paragraph 0041 and Table 3. Therefore, because point 25 falls outside the chromaticity coordinate value ranges recited in claim 4, Juestel does not teach or suggest all elements of claim 4. Accordingly, Applicant asserts that claim 4 is allowable and respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claim 4 and claims 5-6 and 9-10, which depend from allowable claim 4.

Third, assuming *arguendo* a suggestion to modify Juestel and a reasonable expectation of success, Juestel additionally fails to teach all of the claim limitations of claim 11. Claim 11 as amended recites, *inter alia*, a plasma display panel “with a combined red-color purity ranging from 0.657 to 0.670 for a chromaticity coordinate value x and from 0.322 to 0.327 for a chromaticity coordinate value y.”

As discussed above, Juestel's Figure 3 discloses chromaticity coordinate values for red phosphor patterns containing proportional quantities of  $\text{Y(V,P)O}_4\text{:Eu}$  and  $\text{(Y,Gd)BO}_3\text{:Eu}$ . Only point 25 on Juestel's Figure 3 approaches the chromaticity coordinate value ranges recited in claim 11. However, the  $[x, y]$  chromaticity coordinate value of point 25 equals the  $[x, y]$  chromaticity coordinate value of  $\text{Y(V,P)O}_4\text{:Eu}$  disclosed in Juestel, which is  $[0.662, 0.328]$ . See Juestel, paragraph 0041 and Table 3. Therefore, because point 25 falls outside the chromaticity coordinate value ranges recited in claim 11, Juestel does not teach or suggest all elements of claim 11. Accordingly, Applicant asserts that claim 11 is allowable and respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claim 11 and claims 15 and 20, which depend from allowable claim 11.

Finally, assuming *arguendo* a suggestion to modify Juestel and a reasonable expectation of success, Juestel fails to teach all of the claim limitations of claim 16. Claim 16 as amended recites, *inter alia*, a plasma display panel "with a combined red-color purity ranging from 0.660 to 0.670 for a chromaticity coordinate value  $x$  and from 0.322 to 0.327 for a chromaticity coordinate value  $y$ ."

As discussed above, Juestel's Figure 3 discloses chromaticity coordinate values for red phosphor patterns containing proportional quantities of  $\text{Y(V,P)O}_4\text{:Eu}$  and  $\text{(Y,Gd)BO}_3\text{:Eu}$ . Only point 25 on Juestel's Figure 3 approaches the chromaticity coordinate value ranges recited in claim 16. However, the  $[x, y]$  chromaticity coordinate value of point 25 equals the  $[x, y]$  chromaticity coordinate value of  $\text{Y(V,P)O}_4\text{:Eu}$  disclosed in Juestel, which is  $[0.662, 0.328]$ . See Juestel, paragraph 0041 and Table 3. Therefore, because point 25 falls outside the chromaticity coordinate value ranges recited in claim 16, Juestel does not teach or suggest all elements of

claim 16. Accordingly, Applicant asserts that claim 16 is allowable and respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claim 16.

Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention, Applicant respectfully submits that independent claims 1, 4, 11 and 16, and all claims that depend therefrom, are allowable.

**CONCLUSION**

Applicant believes that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated grounds for ejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,



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